

13

metals, biocides, narcotics and common effluent constituents were evaluated. Analysis of the data revealed the rapid killifish test to be similar in sensitivity to the standard EPA test. There are several advantages to the killifish test: a 24 hour exposure duration, utilization of standard laboratory equipment, and no requirements for continuous culture on order to have fish available for toxicity screening.

Conclusions: Killifish test was similar in sensitivity to standard fathead minnow test. Killifish EC50's were more sensitive indicators of toxicity than LC50's for all compounds tested. Embryo batch variability in response to zinc exposure was low. EC50's were less variable than LC50's. Long-term storage of embryos did not affect LC50 sensitivity. Overall control mortality was low, <10%.

Although the present invention has been described in terms of a particular preferred embodiments, it is not limited to those embodiments. Alternative embodiments, examples, and modifications which would still be encompassed by the invention may be made by those skilled in the art, particularly in light of the foregoing teachings.

The invention claimed is:

1. A kit for conducting a toxicity test, comprising:

a first container including a plurality of embryos of a species in a diapause III state and a storage medium that maintains said embryos in a diapause III state, controls moisture content, and keeps the individual embryos separated;

a plurality of second containers, each second container comprising 1) a first conical closed end configured for receiving a plurality of said embryos in a diapause III state and a hatching medium for allowing said embryos to hatch into hatchlings and 2) a second open end having a beveled edge for contacting with 3 material to be tested for toxicity, wherein said second container facilitates embryo contact to induce or promote hatching;

and a third container comprising a plurality of holding cells configured to hold the plurality of second containers at an angle such that the plurality of holding cells holds the plurality of second containers at a 45 degree angle, thereby allowing hatchlings to swim free from the plurality of second containers into the plurality of holding cells.

2. The kit of claim 1, wherein said species is an annual fish species.

14

3. The kit of claim 2, wherein said annual fish species is a killifish.

4. The kit of claim 2, wherein said species is *Northobran-chius guentheri*.

5. The kit of claim 1, wherein said storage medium has a moisture content above about 50%.

6. The kit of claim 5, wherein said moisture content is between about 50% and 80%.

7. The kit of claim 6, wherein said moisture content is about 75%.

8. The kit of claim 1, wherein said storage medium includes a solid material selected from the group consisting of peat moss, refined peat moss, filter paper and processed paper.

9. The kit of claim 1, wherein said first container includes individual compartments, each compartment configured to keep an individual one of said species separated from others of said species stored in said first container.

10. The kit of claim 1, further comprising a filter mechanism for separating said species from said storage medium.

11. The kit of claim 1, wherein said hatching medium comprises water.

12. The kit of claim 11, wherein said hatching medium further comprises a carbon source.

13. The kit of claim 11, wherein said hatching medium further comprises an inorganic mineral or an inorganic salt.

14. The kit of claim 13, wherein said hatching medium includes a member selected from the group consisting of calcium, magnesium, potassium, and ammonium ion.

15. The kit of claim 1, wherein the first container comprises a sealed plastic bag.

16. The kit of claim 1, wherein said hatching medium comprises deionized water having a pH of 6 to 8 and an inorganic salt.

17. The kit of claim 1, wherein the second container comprises a plurality of conical tubes, each conical tube having a volume of 1 mL, thereby causing embryos to cluster near the bottom of the tube such that each embryo is in contact with two or more other embryos.

18. The kit of claim 17, wherein each conical tube holds about 20 embryos.

19. The kit of claim 11, wherein said hatching medium further comprises NaHCO_3 , $\text{CaCl}_2(2\text{H}_2\text{O})$, $\text{MgCl}_2(6\text{H}_2\text{O})$, KCl , and NaCl .

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